

AN - 1991-305649 [42]

AP - JP19890334805 19891226; [Previous Publ. JP3197640] ; JP19890334805
19891226

CPY - TOKE

DC - M13 M25

DR - 1687-U

FS - CPI

IC - C22C1/00 ; C22C1/02 ; C22C27/02 ; C23C14/34 ; H01L21/203 ; H01L21/205

MC - M25-G28

PA - (TOKE) TOSHIBA KK

PN - JP3031474B2 B2 20000410 DW200023 C22C27/02 006pp

- JP3197640 A 19910829 DW199142 005pp

PR - JP19890334805 19891226

XA - C1991-132294

XIC - C22C-001/00 ; C22C-001/02 ; C22C-027/02 ; C23C-014/34 ; H01L-021/203 ;
H01L-021/205

XR - 1999-462522

AB - JP03197640 Ta raw material is reacted with iodine so that only pure Ta
forms TaI₅ at 300-700 deg.C, then TaI₅ is decomposed to Ta and 5/2 I₂
at 800-1,500 deg.C, and Ta is further refined by electron beam
melting. The Ta includes 0 below 50 ppm and Fe, Ni and Cr in amts.
less than 0.05 ppm respectively.

- (Dwg.0/3)

IW - HIGH PURE TANTALUM PRODUCE REACT RAW TANTALUM MATERIAL IODINE
DECOMPOSE TANTALUM IODIDE FORMING ELECTRON BEAM MELT TANTALUM OBTAIN

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NC - 001

OPD - 1989-12-26

ORD - 1991-08-29

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TI - High purity tantalum prodn. - by reacting raw tantalum material with
iodine, decomposing tantalum iodide formed and electron beam melting
tantalum obtd.

EUROPEAN PATENT OFFICE

Patent Abstracts of Japan

PUBLICATION NUMBER : 03197640
PUBLICATION DATE : 29-08-91

APPLICATION DATE : 26-12-89
APPLICATION NUMBER : 01334805

APPLICANT : TOSHIBA CORP;

INVENTOR : KOBANAWA YOSHIKO;

INT.CL. : C22C 27/02 C22C 1/00 C22C 1/02 C23C 14/34

TITLE : HIGH PURITY TANTALUM MATERIAL AND ITS PRODUCTION AND TANTALUM TARGET USING THE SAME

ABSTRACT : PURPOSE: To provide a high purity Ta material usable for semiconductor device by melting Ta refined by an iodide decomposition method in high vacuum.

CONSTITUTION: Ta is refined by an iodide decomposition method. This Ta is melted in high vacuum of $\leq 5 \times 10^{-5}$ mbar, by which a high purity Ta material in which oxygen content is regulated to ≤ 50 ppm and also the contents of Fe, Ni, and Cr are regulated to ≤ 0.05 ppm, respectively, is obtained. If the Ta refined by an iodide decomposition method is further refined by an electron beam melting method, a high purity Ta ingot minimal in contamination with oxygen and nitrogen can be prepared. By using this Ta material, a Ta target of arbitrary shape can be produced.

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